



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,823	01/04/2001	Akira Arai	9319A-000182	3470
7590 08/10/2004 Harness, Dickey & Pierce, P.L.C. P.O. Box 828 Bloomfield Hills, MI 48303			EXAMINER SHEEHAN, JOHN P	
			ART UNIT	PAPER NUMBER
			1742	
DATE MAILED: 08/10/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/754,823	Applicant(s) ARAI ET AL.
	Examiner John P. Sheehan	Art Unit 1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 9-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>05042004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1 to 5, 7 and 9 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Panchanathan (Panchanathan, US Patent No. 5,725,792, cited by the applicants in the IDS submitted January 4, 2001).

Panchanathan teaches a magnetic powder having a composition that overlaps the alloy composition recited in the instant claims (Panchanathan, column 1, lines 37 to 50). Panchanathan also teaches a process of making the disclosed magnetic powder that is similar to, if not the same as, the process disclosed in the instant application (Panchanathan, column 2, lines 1-21). Panchanathan teaches the presence of a hard and soft magnetic phase (column 1, lines 50 to 57). The composition of Panchanathan's Example N (column 3) is based on weight percent (column 1, lines 32 to 33), which when converted to atomic percent (assuming that the atomic weight of the rare earth component is 144) has the composition:

Rare earth	7.6 atomic %
Boron	5.9 atomic %

Niobium 1.2 atomic % and
Iron the balance.

These proportions for Panchanathan's Example N are completely encompassed by the instant claims. Panchanathan discloses that the coercivity of Example N is 5.07 kOe or 399.5 kA/m. In making the magnet of Example N Panchanathan comminutes the alloy to an average particle size of 200 microns (column 2, line 65), otherwise Panchanathan is silent with respect to the average particle size of the alloy powder.

The claims and Panchanathan differ in that: (1) Panchanathan does not teach the exact same proportions as recited in applicants' claims (2) Panchanathan is silent with respect to the soft phase being constrained through the surrounding hard magnetic phase and the irreversible susceptibility; (3) the coercive force of Panchanathan's Example N has a coercivity of 5.07 kOe or 399.5 kA/m while the minimum claimed coercivity of the instant claims is 478 kA/m; and (4) Panchanathan does not disclose an average particle size of 0.5 to 50 microns.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by Panchanathan has a composition that overlaps the alloy composition recited in the instant claims and in the case of Panchanathan's Example N is encompassed by the instant claims, in view of this, Panchanathan is considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, in view of the fact that the alloy taught by Panchanathan is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy taught by the reference would be expected to possess all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). ‘When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.’ In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977).” see MPEP 2112.01.

With respect to the coercivity it is the Examiner's position that although the applicants' claims are directed to an alloy powder, the coercivity values recited in applicants' claims are not for the alloy powder itself but rather are for the bonded magnet made from the claimed alloy powder. With respect to the difference in the coercivity of the bonded magnet of Panchanathan's Example N (399.5 kA/m) and the applicants' claimed lower limit of 478 kA/m, it is the Examiner's position that applicants'

Art Unit: 1742

Sample 3 in Table 1 of the specification (which is the basis for the instantly claimed lower limit) and the bonded magnet of Panchanathan's Example N have different alloy compositions and the respective bonded magnets are made by different processes (compare Panchanathan, column 3, lines 19 to 21 and column 2, line 65 to column 3, line 2 to the instant specification pages 29 and 30). In view of this, the difference in coercivity may be the result of a difference in composition and/or method of making the bonded magnets rather than an actual difference in the applicants' claimed powder and Panchanathan's powder.

Regarding the average particle size of the claimed powder it is the Examiner's position that the powder particle size of 200 microns disclosed by Panchanathan is Panchanathan's preferred powder particle size (column 2, lines 15 and 16). The teachings of a reference are not limited to merely that which is set forth in the examples or the disclosed preferred embodiments. Instead "[a] reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art", MPEP 2123. Except for the statement that a powder particle of 200 microns is preferred, Panchanathan is silent with respect to the powder particle size. In view of this, and the fact that a reference is not limited to its disclosed preferred embodiments it is the Examiner's position that Panchanathan is not limited to any particular powder size but rather encompasses any powder particle size including a particle size of 0.5 to 80 microns as recited in applicants' claims.

2. Claims 1 to 5, 7 and 9 to 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamano et al. (Hamano '807, Japanese Patent Document 11-288807, cited in the IDS submitted May 4, 2004).

Hamano '807 teaches a rare earth iron boron permanent magnet powder having a composition that overlaps the alloy composition recited in applicants' claims (translation, paragraph 0022) and two specific example alloys having compositions that are encompassed by the instant claims (A table 3, Alloys 22 and 23). Hamano '807 teaches that the alloys have hard and soft magnetic phases (translation, claim 2), a particle size that overlaps the particle size recited in the applicants' claims (translation, paragraph 0021) and a coercivity greater than 3.5 kOe (translation, paragraph 0023) with specific examples of bonded magnets having coercivity of 3.7 to 6.4 kOe (translation, paragraph 0139) that overlap the coercivity of the bonded magnets recited in applicants' claims.

The claims and Panchanathan differ in that: (1) Panchanathan does not teach the exact same proportions as recited in applicants' claims (2) Panchanathan is silent with respect to the soft phase being constrained through the surrounding hard magnetic phase and the irreversible susceptibility; and (4) Panchanathan does not disclose an average particle size of 0.5 to 50 microns.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by Hamano '807 has a composition, particle size and coercivity that overlap the instant claims and example alloys that are encompassed by the instant claims, in view of this,

Hamano '807 is considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

“The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages”, In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

Further, in view of the fact that the alloy taught by Hamano '807 is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy taught by the reference would be expected to possess all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). ‘When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.’ In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977).” see MPEP 2112.01.

Response to Arguments

Applicant's arguments filed May 20, 2004 have been fully considered but they are not persuasive.

Applicants argument "that the powder size of 200 μ m as taught by Panchanathan is not taught with 'sufficient specificity to constitute an anticipation under the statute' MPEP 2131.03" is not persuasive. The rejection in view of Panchanathan is not based on anticipation, that is, is not made under 35 USC 102 but rather is based on obviousness under 35 USC 103.

Applicants, citing the two declarations submitted by Hiroshi Kato and Akira Arai under 37 CFR 1.132, argue that the applicants' claimed particle size range of 0.5 to 80 microns provides unexpected results. The Examiner is not persuaded. First, it is noted that applicants' have disclosed that,

"The average particle size of the magnetic powder is not particularly limited" (specification page 18, the last paragraph)

The declarations under 37 CFR 1.132 filed May 20, 2004 are insufficient to overcome the rejection of claims to 3, 5 and 7 to 9 based upon Panchanathan as set forth in the last Office action and above because:

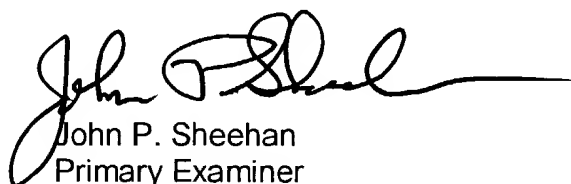
Each of the declarations consists of only applicants' conclusions (see paragraphs 8 to 12 of each declaration). Applicant's conclusions are not factually supported, that is, are not supported by any evidence or data and therefore are given little, if any weight, MPEP 716.01(c).

Art Unit: 1742

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (571) 272-1249. The examiner can normally be reached on T-F (6:45-4:30) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


John P. Sheehan
Primary Examiner
Art Unit 1742

Jps